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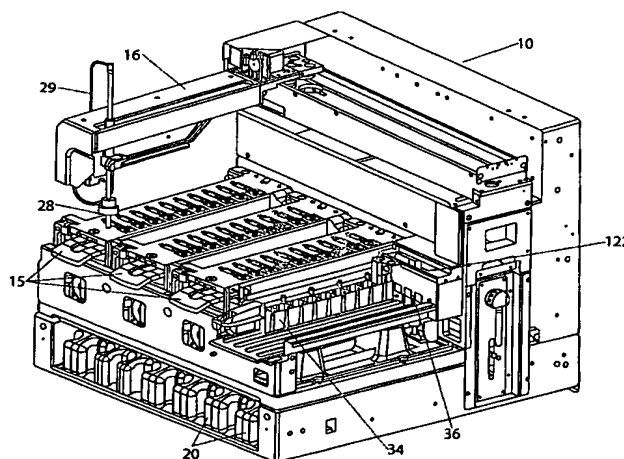
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(54) Title: A METHOD AND APPARATUS FOR FLUID DISPENSATION, PREPARATION AND DILUTION



(57) Abstract: A mixing vial is provided for an automated biological reaction apparatus typically used for staining tissue samples in Immuno-histological and in-situ hybridisation reactions. The mixing vial allows reagents placed on the apparatus to be mixed together to form additional or blended reagents. A reagent dispenser mounted on a robotic arm withdraws reagent from the reagent containers and deposits it into one of the mixing vials. Several reagents can be deposited into each vial. Mixing is undertaken by withdrawing the reagents in a vial and re-dispensing the reagent back into the vial. Mixing may take place between the operation of other tasks performed by the apparatus, and a scheduler is used to ensure blended reagent is provided before it is required in one of the processes undertaken on the apparatus. The apparatus is able to automatically identify which blended reagents are required and when they must be applied to provide an appropriate schedule that minimises time taken to stain samples.